

REMARKS

Claims 1, 2, 6, 11 and 12 stand rejected under 35 U.S.C. § 102(e) as being anticipated by King (U.S. Patent Number 6,873,597), claims 3 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Argyropoulos (U.S. Patent Application Publication Number 2005/0159165), claims 4 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Menon et al. (U.S. Patent Number 6,496,694, hereinafter “Menon”), claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Yoon et al. (U.S. Patent Number 7,127,661, hereinafter “Yoon”), claims 7-9 and 15-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Schmutz et al. (U.S. Patent Number 6,370,185, hereinafter “Schmutz”), and claims 10 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Galyas (U.S. Patent Number 6,687,226). Respectfully disagreeing with these rejections, reconsideration is requested by the applicants. Nonetheless, the applicants have amended independent claims 1 and 11 to more clearly highlight the patentability of the present invention over the prior art.

Language from claims 7 and 15 has been incorporated into claims 1 and 11, respectively. Thus, amended independent claim 1 now recites (emphasis added) “conveying data targeted for **an air interface timeslot** for the transmit period **via multiple backhaul link timeslots.**” In addition, amended independent claim 11 recites (emphasis added) “wherein the controller is further adapted to convey, via the packet controller network interface, data targeted for **an air interface timeslot** for the transmit period **via multiple backhaul link timeslots.**” In rejecting claims 7 and 15, the Examiner asserts that King fails to teach what is recited in claims 7 and 15 but relies on Schmutz instead for the teaching. In particular, the Examiner cites Schmutz column 10 lines 25-36, which read as follows (emphasis added):

In this manner, **all of the TDM channels on a single carrier on the mobile/repeater link 20 can be compressed within a single uplink TDM channel on the backhaul communication link 19**. For example, using Phase Shift Keying (PSK) having 8 states, a single carrier frequency on the mobile/repeater link 20, having eight timeslots, can contain information from up to four (4) mobile units. **Information from these eight (8) timeslots can be compressed into just 2 uplink timeslots or uplink TDM channels on the backhaul communication link 19** without upsetting the format of the GSM TDMA frame format. In particular, the backhaul communication link can maintain a format that is consistent with a typical GSM TDMA frame.

However, the applicants fail to see how Schmutz, as cited, teaches or suggests what claims 1 and 11 now recite. In fact, the applicants submit that Schmutz, as cited, teaches away from what the claims recite. Instead of teaching that data targeted for an air interface timeslot is conveyed via multiple backhaul link timeslots, Schmutz teaches that information from 8 timeslots can be compressed into 2 timeslots / TDM channels on the backhaul. Moreover, Schmutz also says that all of the TDM channels on a single carrier on the mobile/repeater link 20 can be compressed within a single uplink TDM channel on the backhaul communication link 19. The applicants submit that neither of these teachings of Schmutz suggest that data targeted for an air interface timeslot should be conveyed via multiple backhaul link timeslots.

Regarding the rejection of claims 10 and 18, the Examiner cites various portions of Galyas. These portions are quoted below with some adjacent text included for context. Galyas column 3, lines 1-33 reads (emphasis added):

Basically, the IP based BSS 100 operates to address a situation within an IP network 110 where a terrestrial link 112 is overloaded by gracefully degrading a transmission rate of at least one call. More specifically, the IP based BSS 100 and method 200 operate to **measure (step 202) a delay in passing the at least one call through the terrestrial link 112 , and determining (step 204) if the measured delay exceeds a predetermined value**. In response to an affirmative answer, the IP based BSS 100 and method 200 operate to downgrade (step 206) the transmission rate of the at least one call to accommodate the overloaded terrestrial link 112 . Otherwise, the IP based BSS 100 and method 200 operate to maintain (step 208) the transmission rate of the at least one call.

The IP based BSS 100 includes an IP gateway 120 , a central control node 130 and a base station transmitter (BTS) 140 each coupled to the IP network 110 by terrestrial link(s) 112 (e.g., payload link(s)) and/or signalling link(s) 114 . The IP gateway 120 (e.g., interface unit) includes a signalling terminal # 7 (ST 7) 122 and at least one transcoder 124 collectively used to convert between IP based transmissions and circuit switched

transmissions including speech and data received from or transmitted to a mobile switching center (MSC) 150 . In addition, the IP gateway 120 includes at least one packet control unit (PCU) 126 used to convert between IP based transmissions and packet switched transmissions including data received from or transmitted to a serving general packet radio service support node (SGSN) 160 . **The PCU 126 also prioritizes which one of two users that send a communication at the same time will be given priority.** In addition, the PCU 120 also handles a Radio Link Control (RLC) protocol which controls logical signalling channels and link adaption.

Galyas column 6, lines 28-41 (emphasis added):

In the fourth embodiment, the BTS 140 includes an end-point 612 having a buffer 614 located within the application level 302 . The buffer 614 (described in greater detail below) operates to **monitor the delay in passing packet based call(s) through one of the terrestrial links 112** (see FIG. 1) in the IP network 110 . And, **when the delay as measured by the buffer 614 exceeds a predetermined value then the transmission rate (e.g., service bandwidth) of one or more of the packet based calls on the terrestrial link is downgraded** to accommodate the downlink overload instead of disconnecting the call(s). **The predetermined value can be a value corresponding to a QoS requirement or a value corresponding to the size of the buffer 518.**

Galyas column 7, lines 43-56 (emphasis added):

There are several ways to set a threshold for an acceptable delay that corresponds to a required QoS priority. For instance, if the threshold is less than the extra buffering capacity in the routers, then the Graceful Degradation procedure of the present invention could be triggered before the buffers in the routers are flooded and thus avoid throwing away packets. On the other side, if the threshold is more than the buffering capacity in the routers, then packets are being lost, which is an indication of an overloaded network. A counter could be added for detection of lost packets, and active measurements, such as ping, could also be used to detect lost packets. Also, an absolute measurement could be achieved by using a method for distributing global time within the IP network.

Galyas describes monitoring the delay in passing packet based call(s) through one of the terrestrial links and downgrading the transmission rate of one or more of the packet based calls on the terrestrial link when the delay as measured by the buffer exceeds a predetermined value. However, the applicants submit that this is a substantially different approach than that described in the present claims. Rather than measuring or monitoring a delay in passing packet based call(s) through one of the terrestrial links, the claims recite determining an amount of data that **will need to be** conveyed by the

backhaul link for transmission during a transmit period. Thus, the claims describe a forward-looking operation (how much data will need to be conveyed) during a transmit period and are focused on an amount of data rather than a delay incurred.

Furthermore, claims 10 and 18 refer to reducing the coding scheme of a wireless unit having a lowest QoS priority as compared to other wireless units targeted with data during **that** transmit period. In other words, the coding scheme of a wireless unit having a lowest QoS priority is reduced for **that** transmit period. Again, unlike Galyas which describes monitoring the delay in passing packet based call(s), the claims describe a forward-looking operation (how much data will need to be conveyed) during a transmit period and are focused on an amount of data rather than a delay incurred. Therefore, it is unclear to the applicants how Galyas (which is focused on delay) could be combined with King (which is focused on capacity) to achieve a workable embodiment, much less an embodiment described by either claim 10 or claim 18, without substantial hindsight.

Since none of the references cited, either independently or in combination, teach all of the limitations of independent claims 1 or 11, or therefore, all the limitations of their respective dependent claims, it is asserted that neither anticipation nor a prima facie case for obviousness has been shown. No remaining grounds for rejection or objection being given, the claims in their present form are asserted to be patentable over the prior art of record and in condition for allowance. Therefore, allowance and issuance of this case is earnestly solicited.

The Examiner is invited to contact the undersigned, if such communication would advance the prosecution of the present application. Lastly, please charge any additional fees (including extension of time fees) or credit overpayment to Deposit Account No. **502117 -- Motorola, Inc.**

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